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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,054	02/26/2002	Kevin J. Schulz	S01.12-0829/STL 10301	4383

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EXAMINER	
KLIMOWICZ, WILLIAM JOSEPH	
ART UNIT	**PAPER NUMBER**
2652	

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/083,054	SCHULZ ET AL.	
	Examiner	Art Unit	
	William J. Klimowicz	2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-25* is/are allowed.

6)☒ Claim(s) *26-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112 First Paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 26-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

More concretely, the amended claim 26 sets forth, in part, "an adhesive bonded to a portion of the metal material; and a composite material having a higher stiffness to weight ratio than the metal material and being bonded to the adhesive that is bonded to the metal material such that the adhesive does not absorb a measurable amount of energy during bending of the suspension."

Additionally, amended claim 28 recites, in part, "a suspension body formed from a layer of metal; and a composite stiffener formed from a composite material and bonded directly to a portion of the suspension body by an adhesive layer having a thickness such that the adhesive layer does not measurably dampen motion of the suspension."

The original application as filed, however, is completely silent with respect to the adhesive layer having no ***measurable*** dampening characteristics, or an adhesive layer which is

completely incapable of absorbing a "measurable" amount of energy (just what the term "measurable" quantifies is unclear - see rejection of claim 26 under 35 USC 112 2nd paragraph, *infra*), particularly when there is close art, and the defining feature may indeed be the quantitative aspects and/or thickness of the adhesive layer.

Moreover still, the original application actually seems to refute the newly recited limitations. As recited in page 7, lines 6-7 of the instant application as originally filed, the adhesive layer is described as "a polyimide-based liquid adhesive" or "liquid polyimide layer." As is well known, polyimides are a synthetic polymeric resin which are often used for their viscoelastic *damping* properties. The original disclosure does not in any manner refute or otherwise exclude the well known use of the polyimide adhesive so as to preclude the disclosed polyimide adhesive layer from any and all dampening characteristics. Thus, amended claims 26 and 28 recite characteristics of the adhesive layer which were previously undisclosed (e.g., a non-dampening characteristic).

Claim Rejections - 35 USC § 112 Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 26-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 26, the recitation of "an adhesive bonded to a portion of the metal material; and a composite material having a higher stiffness to weight ratio than the metal

material and being bonded to the adhesive that is bonded to the metal material such that the adhesive does not absorb a ***measurable amount*** of energy during bending of the suspension" (emphasis in bold italics added) is unascertainable with any degree of quantitative certainty.

Similarly, with regard to claim 28, the phrase "such that the adhesive layer does not ***measurably*** dampen motion of the suspension" (emphasis in bold italics added) is also unascertainable with any degree of quantitative certainty.

It is ambiguous as to the scope of the term "measurable amount" since this *critical term* was never quantified by any means within the original disclosure. Does this refer to a very thin thickness, and if so what are the limits to this thin thickness? Is it a thickness that is less than .00025 cm as the Applicants seemingly imply in their arguments?

Response to Arguments

Applicants' arguments filed April 22, 2005 have been fully considered but they are not persuasive.

The Applicants allege:

> The term "measurable amount" is definite since the public will be able to determine if they infringe the claim simply be [sic; by] determining if their adhesive layer absorbs a measurable amount of energy. Since the limits of claim 26 are now knowable to the public, amended claim 26 is definite.

See page 6 of Applicants' response filed April 22, 2005.

The Examiner respectfully disagrees with the Applicants' reasoning. More concretely, it is ambiguous as to the scope of the term "measurable amount" since this *critical term* was never quantified by any means within the original disclosure. Does this refer to a very "thin"

thickness, and if so, what are the limits to this "thin" adhesive thickness? Is it a thickness that is less than .00025 cm as the Applicants seemingly imply in their arguments? At what point (perhaps composition of adhesive or its "thinner" thickness) does the adhesive layer start to absorb a "measurable" amount of energy?

The Applicants further state at page 7 of the Response filed on April 22, 2005:

> Although the specification does not explicitly state that the adhesive does not absorb a measurable amount of energy and does not explicitly state that the adhesive layer does not measurably dampen motion of the suspension, these functional characteristics of the adhesive are inherent in the design of the suspension of the present invention because of the thinness of the adhesive layer described in the specification. Specifically, because the adhesive layer described in the specification is so thin, the adhesive layer does not absorb a measurable amount of energy and does not measurably dampen motion of the suspension.
>
> The fact that the application lists a polyimide-based liquid adhesive or liquid polyimide layer as the adhesive layer does not mean that the original application refutes the newly cited limitations. As is well known in the art, the thickness of a polyimide layer determines its dampening properties. Very thick polyimide layers dampen more than thin polyimide layers since it is the sheering of the polyimide across the thickness of the material that dampens motion. Under the present invention, the adhesive layer is so thin that the adhesive layer does not measurably dampen motion of the suspension and does not absorb a measurable amount of energy. These characteristics of the adhesive layer in the present invention are inherent to an adhesive layer of this thickness and as such are supported by the specification's description of the thickness of the adhesive layer in the present invention.

Again, it is unclear if the Applicants are attempting to define or limit their undefined "measurable amount" to a particular thinness of the adhesive. Does this mean that the term "measurable amount" or "measurably dampen" ***limits the thickness of the adhesive to a thickness no greater than the maximum disclosed amount of .00025 cm?*** If not, then what ***undisclosed*** thickness amount exceeding the maximum disclosed thickness of adhesive would fall within the scope of the meaning "measurable amount" or

"measurably dampen"? This quantitative critical limitation is certainly not inherent, as Applicants apparently would have the Examiner believe.

Allowable Subject Matter

Claims 1-25 are currently allowed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (571) 272-7577. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

William J. Klimowicz
Primary Examiner
Art Unit 2652

WJK